

If we compare the descriptions of gonorrhoea in a textbook of 1928 with those described in a current textbook, the chapters dealing with complications and therapy will be found to be radically changed. Since the introduction of antibiotic therapy, complications have decreased markedly and treatment is almost invariably given systemically.

In our practice we seldom use penicillin because of the risk that it may mask syphilis or provoke allergic reactions, and also because many strains of the gonococcus are developing a progressive resistance. We have found tetracycline, chloramphenicol, streptomycin, rovamycin, kanamycin, and the sulphonamides satisfactory, but at present we are successfully using the 'minute' treatment of gonorrhoea suggested by Siboulet. This consists of the administration of ten tablets of 250 mg. thiamphenicol, taken five tablets at a time, with a few minutes interval, on 2 successive days. The results are exceptionally good and we now think that the 'minute' treatment is the therapy of choice for gonococcal infections.

Epidemiological and Therapeutic Data on Gonorrhoea in Genoa and Other Parts of Italy. A. BACCAREDDA-BOY and A. REBORA (*Dermosyphilopathic Clinic of the Faculty of Medicine, Genoa, Italy*)

This investigation has extended for 13 years, starting from 1958, the year which saw the suppression of brothels and control of prostitution in Italy. The data referring to Genoa show that after the increase observed initially, morbidity dropped and remained practically unchanged.

The same trend was observed for gonorrhoea in the whole region of Liguria. On the other hand, over the whole of Italy as well as in Milan and in Naples, gonorrhoea increased remarkably. An examination of the population curves of Genoa, Naples, and Milan showed that the increase of disease corresponded to a movement of population towards the large towns of people from regions with low standards of hygienic and sexual education.

As far as therapy is concerned, from 1961 to 1970 the incidence of strains with partial resistance to penicillin was 7.63 per cent. in the whole of Italy, while in some cities such as Milan and Trieste the incidence ranged between 40 and 50 per cent.

In the University Dermosyphilopathic Clinic, of Genoa, after the use of thiamphenicol, first used as an experimental drug and later as standard therapy, we saw fewer cases of treatment failure, at the most 4.7 per cent. Other antibiotics have revealed a high percentage (average 20 per cent.) of resistant infections.

Epidemiological Aspects of Gonococcal Infections in Dakar. A. J. FAYE (*Dermatological Clinic of the Faculty of Medicine, Dakar, Senegal*)

In Senegal, particularly in Dakar, gonococcal infections are more frequent among those of the lower socio-economic groups who are treated at the Institute of Social Hygiene. The progressive increase of cases does not seem to be related to bacterial resistance to the antibiotics commonly used, but, in Dakar, at least, to a deficiency of health education among our population. Patients neglect

their infections or obtain only partial treatment because of their poor economic status and the lack of medicines in our dispensaries.

Changes in habits due to economic and social progress, as well as migration and urbanization, explain the higher occurrence of gonococcal infections in the last few years among young students of from 16 to 18 years of age.

A suitable health education programme would have every prospect of success in limiting the spreading of the disease, since in our country the gonococcus has apparently not yet developed resistance to antibiotics.

Problems Concerning Gonorrhoea in Austria. A. F. LUGER (*City Hospital Wien-Lainz, Department of Dermatology, Vienna, Austria*)

The number of cases of gonorrhoea in Austria remained approximately the same every year from 1952 to 1969, whereas cases of syphilis have gradually increased from 1959 onward. A similar tendency with an analogous rate of increase has been observed among the out-patients at the Second University Skin Clinic.

Cases of gonorrhoea are ten to fifty times more frequent among unregistered prostitutes than among registered, controlled prostitutes, whose morbidity rate is not significantly higher than that of the population of Vienna. In the capital the risk of infection with syphilis is greater from casual partners from the general population than from registered prostitutes. The number of cases of gonorrhoea officially reported is highest in March, June, August, and September.

In the years 1960 to 1968 the average age of patients with a first infection fell by 2½ years.

Penicillin sensitivity of gonococcal strains has not decreased significantly since 1967. Therapy failures are due mainly to dosage errors or to the administration of delayed absorption preparations.

The intensification of antiepidemic measures should result in a gradual reduction of the problems of gonorrhoea in Austria.

MICROBIOLOGY, DIAGNOSIS and TREATMENT

FIRST SESSION

Aspects of the Present Problem of Gonorrhoea in Spain. J. GAY PRIETO (*Central University, Department of Dermatology and Venereology, Madrid, Spain*)

In Spain, as in many other countries, practitioners and specialists are not obliged to report cases of gonorrhoea, and exact figures of the incidence are not available.

Some important data, recorded by the Epidemiological Unit of the U.S. Sixth Fleet, show that from a venereal point of view the most heavily affected port on the Mediterranean sea is Barcelona (7 cases per thousand) followed by Valencia (4 cases per thousand), while the incidence in Marseilles has never reached 4 per thousand. Data on gonorrhoea in the well-known holiday areas of Spain confirm the important role of tourism in the spreading of venereal diseases.

Patients treated by general practitioners or specialist physicians or in official venereal disease clinics usually recover after simple antibiotic therapy and we have not

yet observed any resistance of the gonococcus to antibiotics.

Serological Diagnosis in Gonorrhoea. A. A. GLYNN and P. J. WATT (*Wright-Fleming Institute of Microbiology, St. Mary's Hospital Medical School, London, England*)

The increasing prevalence of gonorrhoea has accentuated the need for a serological diagnostic test, particularly in women with chronic or latent infections in whom cultural methods are unsatisfactory. However, a diagnostic test, to be useful, must be also highly specific and in the gonococcal field the general rule holds that increasing sensitivity is associated with decreasing specificity. While the choice of method is largely based on practical convenience, the appropriate specificity can be achieved only by finding suitable antigens. It is the search for these which is now occupying most workers. Results in our laboratories have shown that the choice of the gonococcal strains from which to prepare the antigen is extremely important.

Influence of Gonococcal Urethritis in Men on their Psychiatric State. R. GIARD (*Cochin Hospital, Department of Urology, Paris, France*)

Urogenital infections in males can influence, more than any other disease, the psychoemotional equilibrium of patients. The severity and duration of such psychic repercussions, usually represented by depression, depend essentially on the psycho-affective constitution of the patient, but the behaviour of the physician in diagnosing and treating genital infections can play an important role in resolving or worsening psychoemotional changes.

Some examples are reported in order to demonstrate the ideal behaviour of the physician in the presence of emotionally sensitive patients.

Thiamphenicol in the Treatment of Venereal Diseases. E. HEINKE (*Army Central Hospital, Department of Dermatology, Coblenz, Germany*)

580 patients suffering from gonorrhoea (379 from the Coblenz area, Central Rhineland District, and 201 from the Hamburg area) were treated with a single oral dose of 2.5 g. thiamphenicol.

Of the 379 cases (272 men, 107 women) from the Coblenz area, 374 (98.7 per cent.) were cured, and five (2 men and 3 women) (1.3 per cent.) relapsed.

Of the 201 cases from the Hamburg area, 195 (97 per cent.) were cured and six (3 per cent.) relapsed.

The overall results were considered very good, the total cure rate being 98.1 per cent.

The success of the treatment in ten patients with gonorrhoeal epididymitis was outstanding; six patients received 2.5 g. and four received 1.5 g. thiamphenicol orally for 5 or 6 days, and all were cured.

The results of treatment of seventeen patients with non-specific urethritis (1.5 g. thiamphenicol daily for 5 to 8 days) were also good; fifteen patients remained free of relapse. Serial smears and cultures for gonococci showed that the bacteriostatic effect on *Neisseria gonorrhoeae* of 2.5 g. thiamphenicol in a single oral dose began between the second and third hours after administration.

With a single dose (2.5 g.) and repeated doses (1.5 g. daily for 6 days) of thiamphenicol, no change in the peripheral blood picture could be demonstrated even after months. With the same dosage and conditions, no effect on spermatogenesis was observed.

Serial darkfield examinations of material from primary chancres showed that *Treponema pallidum* disappeared at the latest 72 hours after a single dose of 2.5 g. thiamphenicol, and the Herxheimer reaction did not occur after a subsequent injection of penicillin.

The tolerance of thiamphenicol in the form we used was excellent. Allergies and other side-effects such as gastric disturbances and vomiting were not observed.

SECOND SESSION

The Current State of Treatment of Gonorrhoea with Reference to Decreased Penicillin Sensitivity of *Neisseria gonorrhoeae*. J. MAYER-ROHN (*University Hospital Eppendorf, Clinic of Dermatology, Hamburg, Germany*)

12 years ago it appeared that, as was the case with the sulphonamides, total resistance of *Neisseria gonorrhoeae* to penicillin would develop. In 1961 the average penicillin sensitivity of *N. gonorrhoeae* was about 0.164 units/ml. in contrast to 0.001 units/ml. in the years 1945 to 1956. However, the trend of increasing resistance did not progress and in 1969 in Hamburg the average sensitivity was 0.09 to 0.12 units/ml. The reasons for this behaviour are discussed. The current treatment for uncomplicated gonorrhoea is 5 m.u. penicillin* in males and 10 m.u. in females. In cases of penicillin allergy, tetracycline, chloramphenicol, thiamphenicol, spiramycin, or other antibiotics can be used in high doses.

Experience in the Treatment of Gonorrhoea with Penicillin. F. NORTON-BRANDÃO (*Central Dispensary of Social Hygiene (Director Dr. Cristiano Nina, M.D.), Portugal*)

Penicillin can still be used advantageously in the treatment of gonorrhoea, but the number of less sensitive strains of gonococci is reaching critical proportions. The increase in the resistance of gonococcal strains cannot easily be met by a further increase in dosage, because this would require the administration of injections of too great a volume.

In Lisbon, an 89 per cent. cure rate was achieved in male patients with a total dose of 8 m.u. aqueous procaine penicillin, given as 4 m.u. on two consecutive days.

With this dosage the failure rate was reduced to 11 per cent., from the 18 per cent. which was previously obtained with 4 m.u. administered in the same way, but this higher dosage seems to be very near the practical limits of administration.

We are thus faced with two problems, to find a substitute for the treatment of those cases which fail to respond to penicillin therapy and to find it immediately. This new drug should be used either alone or in some way to 'reinforce' the action of penicillin after simultaneous or consecutive administration.

*Sodium penicillin G 4.5 m.u. and benzathine penicillin 0.5 m.u. administered with lignocaine hydrochloride 40 mg.